

## CLAIMS

What we claim is:

1. A frequency modulating (FM) transmitter, comprising:
- a reference frequency generator;
  - a reference frequency divider for frequency dividing said reference frequency;
  - a stereo modulation circuit for frequency modulating a right and a left audio signals (stereo modulating) by one output of said reference frequency divider to supply the resultant signals stereo modulated signals as FM signals;
  - an oscillator circuit for generating carrier waves to transmit said FM signals received from said stereo modulation circuit;
  - a program counter for frequency dividing said carrier waves into variable frequency components; and
  - a PLL frequency synthesizer which has a phase comparator circuit for comparing the output of said program counter with another output of said reference frequency divider to provide at its output end a control signal for controlling said oscillator circuit.
2. The FM transmitter as claimed in claim 1, wherein the frequency division ratios of said program counter and the modulation level of said stereo modulation circuit are externally controllable.
3. The FM transmitter as claimed in claim 1, wherein the frequency of said reference frequency generator is set to either one of 7.6 MHz, an integral multiple of 7.6 MHz, or integer fractions of 7.6 MHz.